

PML 40104

Certificate IV in Laboratory Techniques



This qualification is defined in the nationally endorsed cross-industry Laboratory Operations Training Package (PML 04).

A Training Package links workplace competencies with qualifications under the Australian Qualifications Framework.

- ◆ Have your existing skills and knowledge recognised
- ◆ Gain a qualification or have a single competency recognised
- ◆ Contextualised to your workplace
- ◆ Flexible training delivery

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PML 40104

Certificate IV in

Laboratory Techniques

This qualification provides for those wishing to work **autonomously or with limited supervision** as a tester. Graduates will be able to progress through a career path to the appropriate level of employment, as technical assistants and technologists.

The nominal duration of the training program is up to **36 months**, although with recognition of current competency and self-paced learning, it can be completed appreciably sooner.

Laboratory technicians undertake a wide range of sampling and testing that requires the application of a broad technical knowledge and some scientific knowledge.

Although laboratory technicians generally work in a laboratory, they often work closely with other personnel throughout the workplace and with suppliers. They may assist other personnel to solve technical problems and to adjust formulations and production mixes. They may also train them to collect samples and conduct basic tests reliably.

Their work involves similar tasks within one scientific discipline with occasional peak periods and some interruptions.

Entry can be through:

- a **new-start traineeship** (in Queensland, this is funded through the User Choice Program by the Department of Education, Training and the Arts)
- an **existing worker traineeship**
- **fee-for-service**

Programme Structure – 16 units of competency:

Five compulsory core units:

PMLCOM300B Communicate with other people
PMLDATA400A Process and interpret data
PMLOHS400A Maintain laboratory/field workplace safety
PMLORG301A Plan and conduct laboratory/field work
PMLQUAL401B Apply quality system and continuous improvement processes

Plus eleven elective units

The elective units must include:

- ◆ a minimum of five (5) units from the PML 400 series units, including at least one (1) of the PML400 series units shown with '*' in the electives following
- ◆ a maximum of four (4) units from the PML300 series
- ◆ a maximum of three (3) units from the PML500 series
- ◆ a maximum of three (3) relevant units from other endorsed Training Packages.

Units may be selected from:

PMLMAIN300B Maintain the laboratory fit for purpose
PMLOHS301B Work safely with instruments that emit ionising radiation
PMLQUAL300B Contribute to achievement of quality objectives
PMLQUAL301B Apply critical control point requirements
PMLSAMP302A Receive and prepare samples for testing
PMLTEST300B Perform basic tests
PMLTEST303B Prepare working solutions
PMLTEST304B Prepare culture media
PMLTEST305B Perform aseptic techniques
PMLTEST306B Assist with fieldwork
PMLTEST307B Prepare trial batches for evaluation
PMLTEST308A Perform microscopic examination
PMLTEST310A Perform histological techniques
PMLCAL400A Perform standard calibrations *
PMLMAIN400A Maintain and control stocks
PMLQUAL400B Contribute to the ongoing development of HACCP plans
PMLORG400A Prepare practical science classes and demonstrations
PMLSAMP400B Obtain representative samples in accordance with sampling plan *
PMLSAMP401A Prepare mineral samples for analysis *
PMLTEST402B Prepare, standardise and use solutions *
PMLTEST403B Assist with geotechnical site investigations *
PMLTEST404A Perform chemical tests and procedures *
PMLTEST405A Perform food tests *
(Prerequisite: PMLTEST308A)
PMLTEST406A Perform physical tests *
PMLTEST407A Perform biological procedures *
(Prerequisites: PMLTEST305B and PMLTEST308A)
PMLTEST411A Perform mechanical tests *
PMLTEST412A Prepare tissue and cell cultures *
(Prerequisite: PMLTEST305B)
PMLCOM500B Provide information to customers
PMLCAL500A Perform non-standard calibrations
(Prerequisite: PMLCAL400A)
PMLCAL501A Create or modify calibrations procedures
(Prerequisite: PMLCAL500A)
PMLCAL502A Create or modify automated calibrations procedures
(Prerequisite: PMLCAL501A)
PMLDATA500B Analyse data and report results
(Prerequisite: PMLDATA400A)
PMLDATA501B Use laboratory application software
PMLMAIN501B Assist in the maintenance of reference materials
PMLMAIN502A Maintain instruments and equipment
PMLORG500B Schedule laboratory work for a small team
PMLQUAL500A Monitor the quality of test results and data
(Prerequisite: PMLDATA400A)
PMLTEST501B Perform microbiological tests
(Prerequisite: PMLTEST407A)
PMLTEST502B Perform haematological tests
(Prerequisite: PMLTEST407A)

PMLTEST503B Perform histological tests
(Prerequisite: PMLTEST310A)
PMLTEST504B Perform chemical pathology tests
(Prerequisite: PMLTEST407A)
PMLTEST505B Conduct sensory analysis
PMLTEST509B Perform chemical pathology tests
(Prerequisite: PMLTEST407A)
PMLTEST511B Supervise earthworks inspection, sampling and testing operations
(Prerequisites: PMLTEST403B or PMLSAMP400B and PMLTEST406A)
PMLTEST512A Apply electrophoretic techniques
(Prerequisites: PMLTEST303B or PMLTEST402B and PMLTEST404A)
PMLTEST513A Apply routine chromatographic techniques
(Prerequisites: PMLTEST303B or PMLTEST402B and PMLTEST404A)
PMLTEST514A Perform fire assay techniques
(Prerequisite: PMLSAMP401A)
PMLTEST515A Design and supervise complex environmental field surveys
(Prerequisite: PMLTEST408A)
PMLTEST516A Provide input to production trials
(Prerequisite: PMLTEST404A or PMLTEST405A or PMLTEST406A or PMLTEST411A)
PMLTEST517A Perform tissue and cell culture techniques
(Prerequisites: PMLTEST412A and PMLTEST407A)
PMLTEST518A Perform molecular biology tests and procedures
(Prerequisite: PMLTEST407A)
PMLTEST519A Prepare animal and plant material for display
(Prerequisite: PMLTEST407A)
PMLTEST520A Perform complex tests to measure engineering properties of materials
(Prerequisite: PMLTEST411A)
PMLTEST521A Perform laboratory based ecological techniques
(Prerequisite: PMLTEST407A)
PMLTEST522A Perform complex tests to measure chemical properties of materials
(Prerequisite: PMLTEST513A or PMLTEST524A)
PMLTEST523A Apply complex instrumental techniques
(Prerequisite: PMLTEST513A or PMLTEST524A)
PMLTEST524A Apply routine spectrometric techniques
(Prerequisites: PMLTEST303B or PMLTEST402B and PMLTEST404A)
PMLTEST525A Apply routine electrometric techniques
(Prerequisites: PMLTEST303B or PMLTEST402B and PMLTEST404A)
PMLTEST526A Perform food analysis
(Prerequisites: PMLTEST405A or PMLTEST407A)

Other units may be available, subject to demand.

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Vocational Education & Training Specialists

- ◆ ABN 38 010 041 835
- ◆ ACN 010 041 835
- ◆ National RTO No 105800
- ◆ Registered to deliver training and issue qualifications from the following national training packages:
 - ◆ PMA 02 Chemicals, Hydrocarbons & Oil Refining
 - ◆ PMC 04 Manufactured Mineral Products
 - ◆ PML 04 Laboratory Operations
 - ◆ BSB 07 Business Services
 in all states and territories of Australia.
- ◆ Corporate Member Association of Geotechnical Testing Authorities

	Cert. I	Cert. II	Cert. III	Cert. IV	Diploma	Advanced Diploma
Laboratory Operations		✓	✓	✓	✓	✓
Chemical, Hydrocarbons & Oil Refining	✓	✓	✓	✓		
Manufactured Mineral Products	✓	✓	✓	✓		
Business Services				✓		

